

REMARKS

Claims 1-2, 4-11 and 13-16 are pending in the application, new claims 13-16 having been added by this amendment.

Claims 4-11 were withdrawn from consideration.

Claim 1 was rejected under 35 U.S.C. §35 U.S.C. §102(e) as being anticipated by Miyawaki et al., U.S. Patent No. 5,952,694. Claim 2 was rejected under 35 U.S.C. §103(a) as being unpatentable over Miyawaki et al., in view of Klebanoff, U.S. Patent No. 6,169,652.

The Examiner in rejecting claim 1, on the basis of Miyawaki et al., contends that electrode 30/wiring is formed to connect the N and P-type region, citing column 9, lines 6-8, and Fig. 10 of Miyawaki et al., (Office Action, page 2, paragraph 3, line 6).

Applicants respectfully disagree. The Examiner indicates that forming an N-type region and a P-type region on a substrate is found in column 8, lines 63-64 of Miyawaki et al., (Office Action, page 2, paragraph 3, line 5). Column 8, lines 63-64, of Miyawaki et al. refer to a p^+ -type region 12 and an n^+ -type region 14. However, contrary to the Examiner's assertion, there is no connection between p^+ -type region 12 and n^+ -type region 14 mentioned in column 9, lines 6-8 of Miyawaki et al. There is only disclosed a connection of n -type region 1 to A1 electrode 30 through the n -type region 14 and the n^+ -type region 19.

In addition, in the Office Action, the Examiner argues that Miyawaki et al teaches applying a He-Ne laser/light source on the upper surface of the semiconductor substrate, (col. 21, lines 32-34), the He-Ne laser having a wavelength of 600 nm, (col. 8, lines 54-55), (Office Action, page 3, lines 3-5). However, the purpose of irradiating a He-Ne laser/light having a wavelength of about 630 nm in Miyawaki et al. is detecting alignment marks (hollow portions), as disclosed in col. 8, lines 54 to 56, and col. 21, lines 32 to 34, whereas light having a

wavelength of 500 nm to less than 1 μm is radiated to inhibit galvanic effects due to photoexcitation in the present invention. Miyawaki et al. does not teach or suggest irradiating a He-Ne laser/light having a wavelength of about 630 nm in order to reduce the electromagnetic force at the PN junction in a semiconductor substrate, thereby inhibiting galvanic effects due to photoexcitation before, during, or after a step including CMP.

Furthermore, the Examiner argues that Miyawaki, et al. discloses performing the cleaning step after polishing the semiconductor substrate, (col. 13, lines 40-42), (Office Action, page 3, lines 7-8). However, in col. 13, lines 40 to 42, of Miyawaki et al., no reference is made to cleaning.

With regard to claim 2, the Examiner argues that both Miyawaki et al. and Klebanoff are concerned with the step of cleaning the semiconductor substrate, (Office Action, page 4, lines 7-8). However, since Miyawaki et al. only mentions cleaning in col. 20, lines 45 to 46, which, in pertinent part, state that, “a monocrystalline Si body 1’ having the oxide films 4 is cleaned,” it is respectfully submitted that Miyawaki et al. is not concerned with the step of cleaning the semiconductor substrate. Accordingly, it is believed that it would be difficult for one of ordinary skill to combine the teachings of Miyawaki et al. and Klebanoff.

In view of the above remarks, it is believed that claims 1, 2, and 13-16 are in condition for allowance, which action is respectfully solicited. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

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Deposit Account 50-1290.

Respectfully submitted,



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